



Cyc'lock

# Whitepaper

Network of connected bicycle garages,  
accessible via an application,  
secured by the



elrond Blockchain





# Cyc'lock



[www.cyclock.co](http://www.cyclock.co)



[twitter.com/CycLockOfficial](https://twitter.com/CycLockOfficial)



[linkedin.com/company/cyc-lock-bordeaux](https://linkedin.com/company/cyc-lock-bordeaux)

The information contained in this document should not be construed as financial advice or advice of any kind.

This document is subject to change.

All of the elements contained in this document are subject to continuous review in terms of technical, legal and tax studies.

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# 1 Introduction

1.1 Abstract

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1.2 The market

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1.3 Cyc'lock model

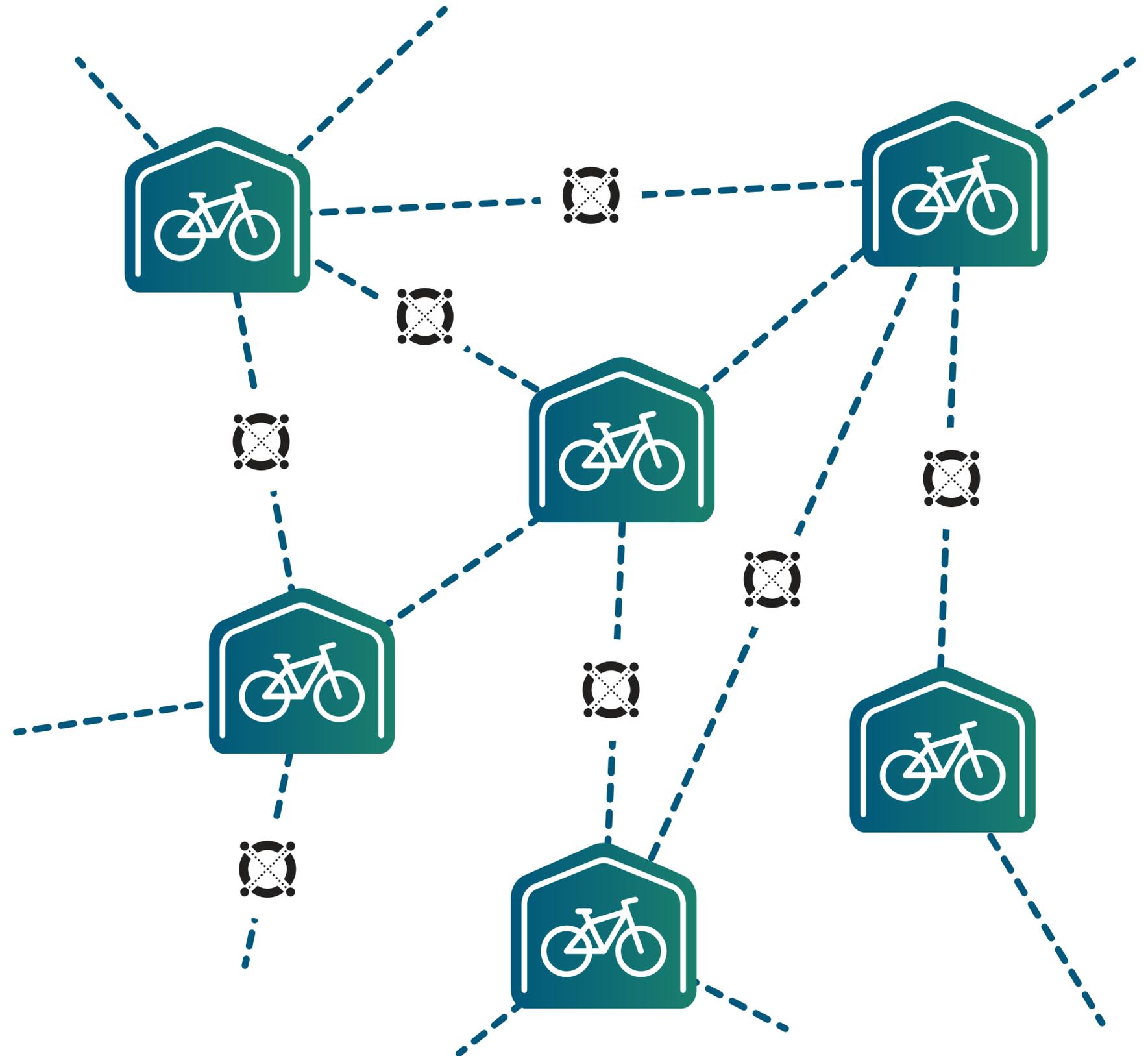
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1.4 Increase in value



# 1.1 Abstract

Create the first network of connected bicycle garages accessible via an application secured by the Elrond blockchain, the first green blockchain in Europe.



Cyc'lock



elrond

# An IoT company

Cyc'Lock's ambition is to develop over the years different services through IoT; the first project concerns bicycle parking.

The objective is to promote soft mobility in France and then on a European scale, by creating and making accessible closed parking spaces for bicycles using a connected locking system.

Once the parking spaces are connected, we make them accessible to cyclists via our application for smartphones.

Today, the problem of **theft** and **damage** is the second biggest obstacle to the use of bicycles in the city, with too few secure solutions available. The consequence:



1 bicycle stolen every minute in France.



1 cyclist out of 2 who will be a victim during his life and many of them abandoning this means of transport.

**To create this parking network, we offer companies and administrations two different products** ☒

**1**

If they already own one or more garages, we equip them with our connected locking system to integrate existing garages into the network.

**2**

And if they don't already have garages, we will offer them our own model composed of individual and connected boxes.



The cyclist will then be able to access the network of bike garages using his or her smartphone, for a monthly fee.



# The Cyc'Lock integrative network

In order to build a real connected network, in which numerous parking spaces are made available to cyclists, it is necessary to create **a network adapted to the demand in a metropolis.**



In order to offer users secure parking at the end of most of their journeys, the need for garages in the hypercenters is high: **1 every 100m** and in the suburbs **1 every 200m.**



To build this network, we integrate parking spaces installed by communities, companies, residences, developers and we add garages installed by us.



## **Better understand usage** ☒

**1**

**The more users we have, the more we know about the use of bikes in the city.**

Blockchain technology allows us to store the numerous data collected while guaranteeing their security and the anonymity of users.

Thanks to these figures, we can more intelligently install future locations where there is a need.

**2**

In addition, many government agencies are looking for data from the field on various topics addressed by the company.

**Thus, the network is constantly being improved.**

## 1.2 The market

### The current parking context ☒

Currently, different parking solutions exist, but they do not fit into a network strategy.

Cyclists are forced to use multiple access methods (key, badge, code, etc.) for each of their parking points.

Moreover, there is no guarantee that they will find a safe place to park their bike before they arrive.



# In France

30 million regular bicycle users and about 60% of those wishing to use bicycles on a daily basis give up because of the **lack of facilities and the associated safety**.

The current modal share of cycling is estimated at 4% of trips, and is expected to rise to **9% by 2024 and 12% by 2030**.

In addition to a **117% increase in bicycle sales** in France from 2019 to 2020, the number of electric bicycles represents about 20% of the market and is expected to increase to **11 million units** sold in Europe by 2025.



The health crisis has had a strong positive impact on the increase in the number of cyclists in major cities.

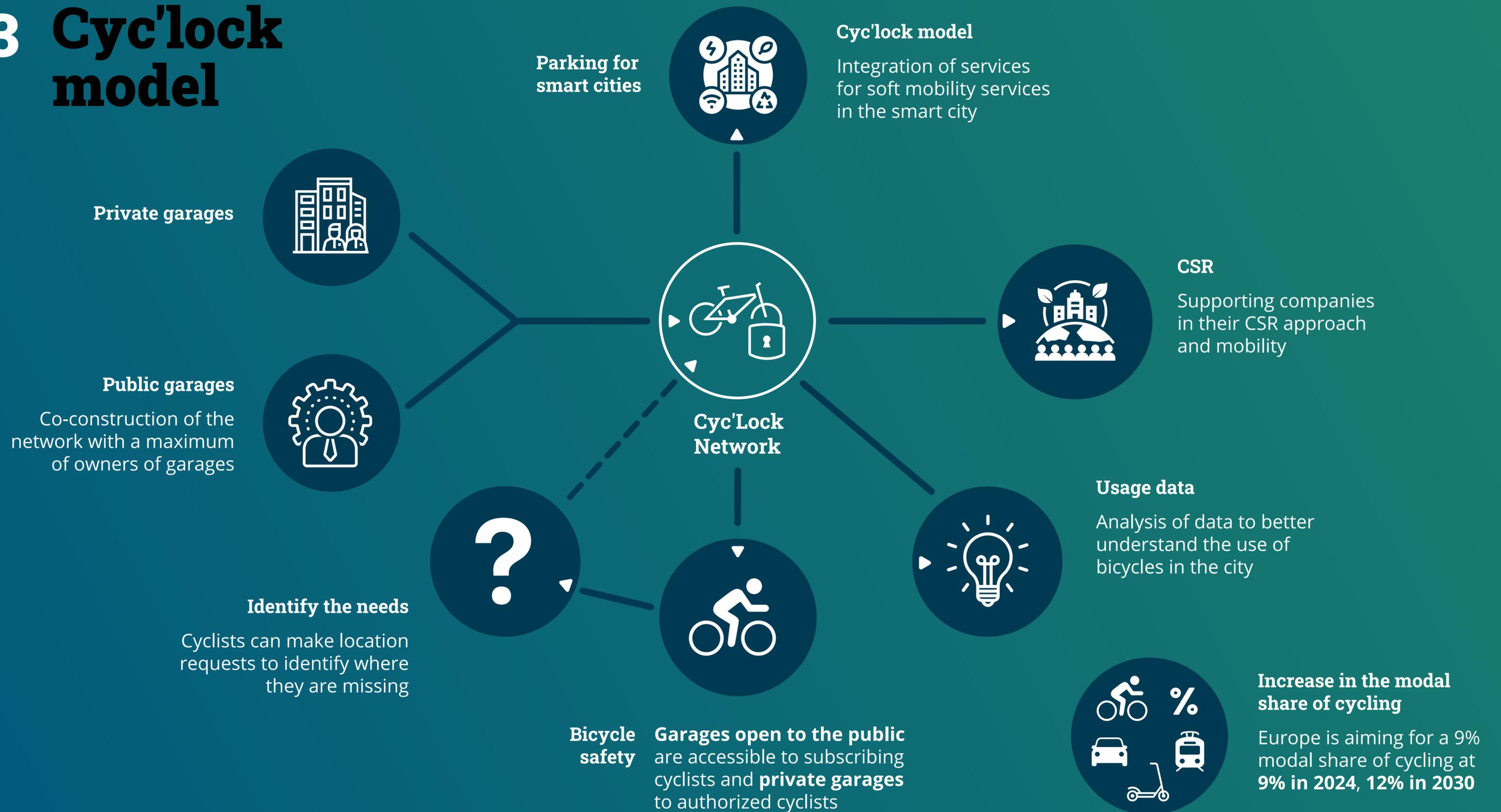
This is not enough, and there are many needs to transform today's cities into smart and bikeable cities.

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In addition, the **legislative framework** imposes on certain actors the provision of parking spaces dedicated to bicycles:

Article 41 (III, IV and VII.) of Law No. 2015-992 on the energy transition for green growth of August 17, 2015 takes up the principle of parking in buildings for residential and office use. But in addition to these "housing complexes and tertiary buildings", which were included in the bill, the LTCEV will extend the obligation to provide secure bicycle parking to industrial buildings, those housing a public service, shopping centers and cinemas (see full text p. 42).

# 1.3 Cyc'lock model



## 1.4 Increase in value

**Through its economic model, Cyc'Lock has the possibility to grow in two ways** ☒

**1**

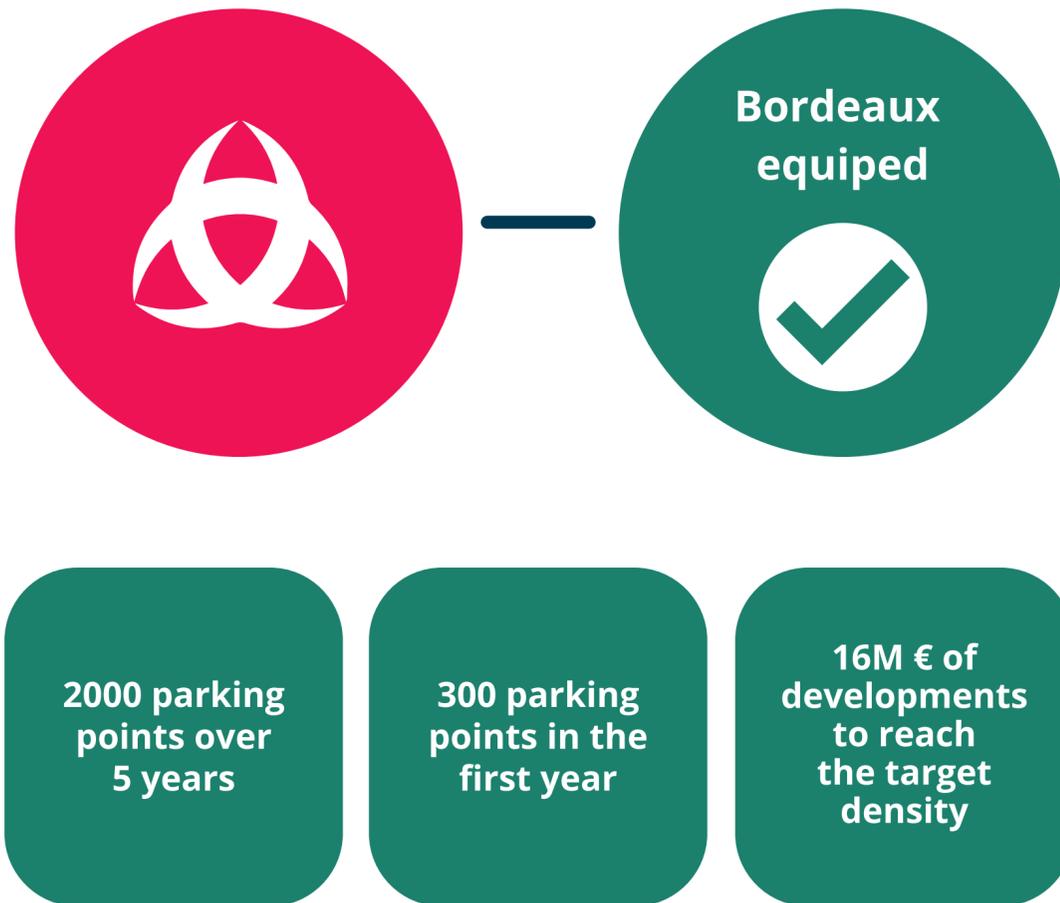
by completing a network started within a **metropolis**

**2**

by arriving on **new cities.**

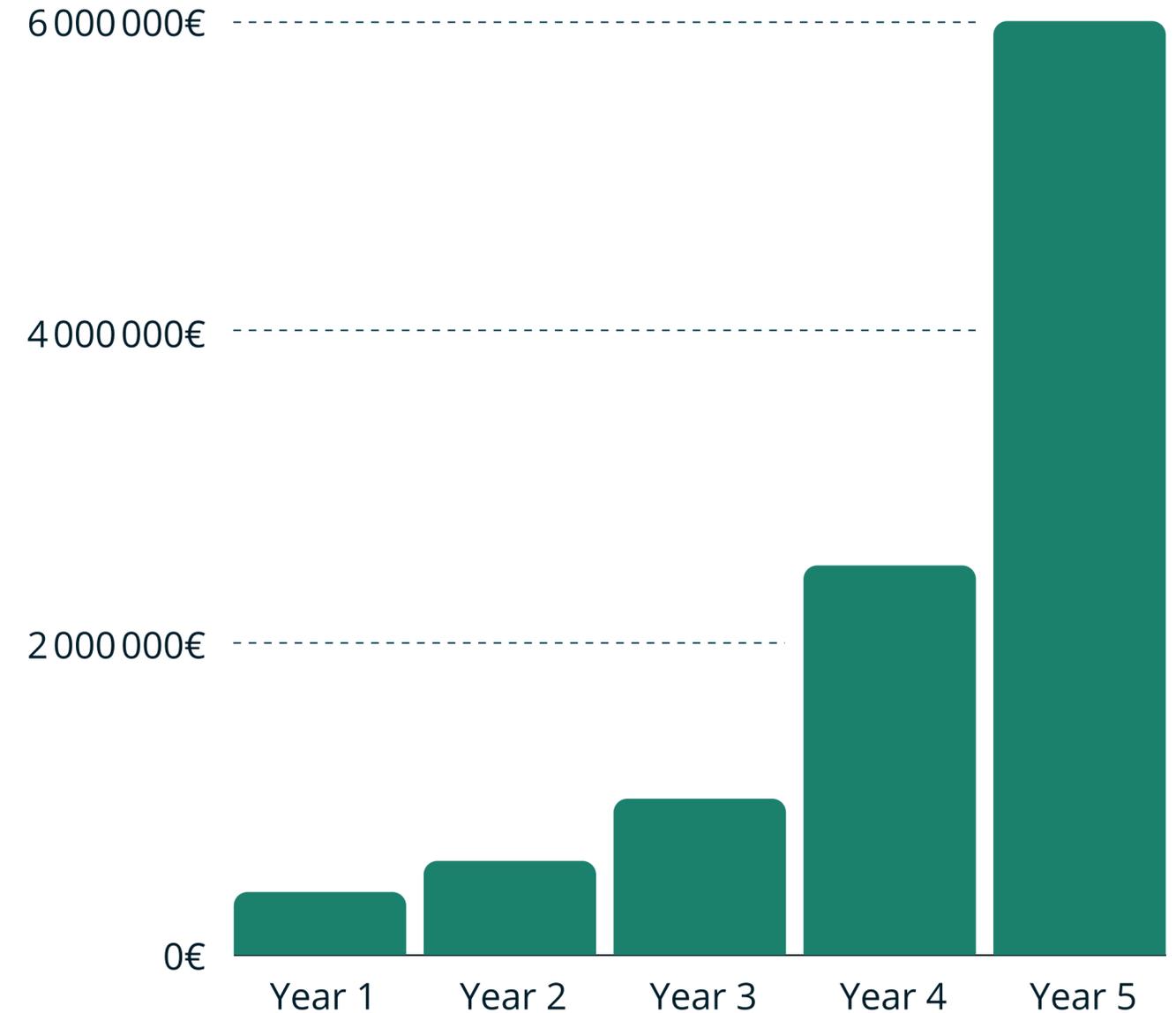
In order to quickly offer sufficiently dense networks, Cyc'Lock wishes to invest in its network by financing part of the development of the parking spaces (converted car spaces, etc.) made available by the municipalities.

# Development assumption



**Average cost per parking point\* 8k €.**

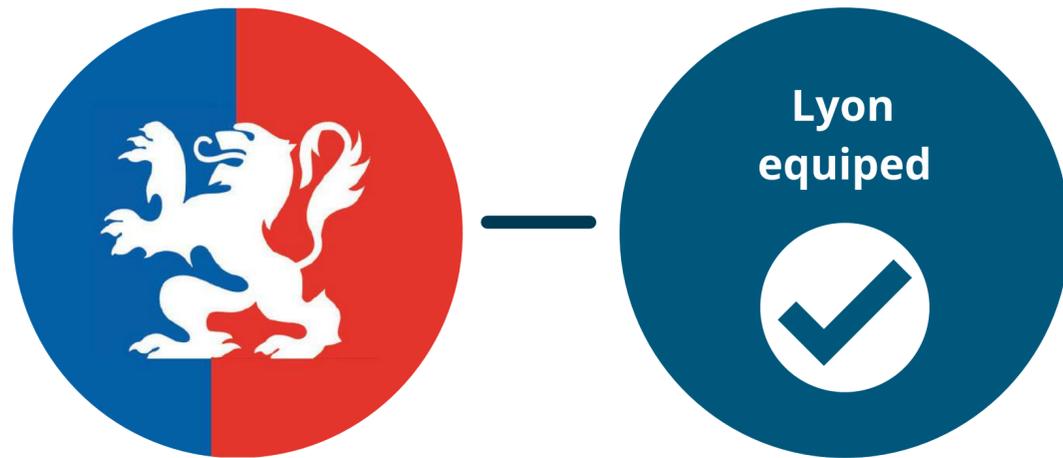
\*Cost calculated according to the ratio of garages needed to be installed and the number of garages already present to be connected



**Strong local revenue growth over 5 years**

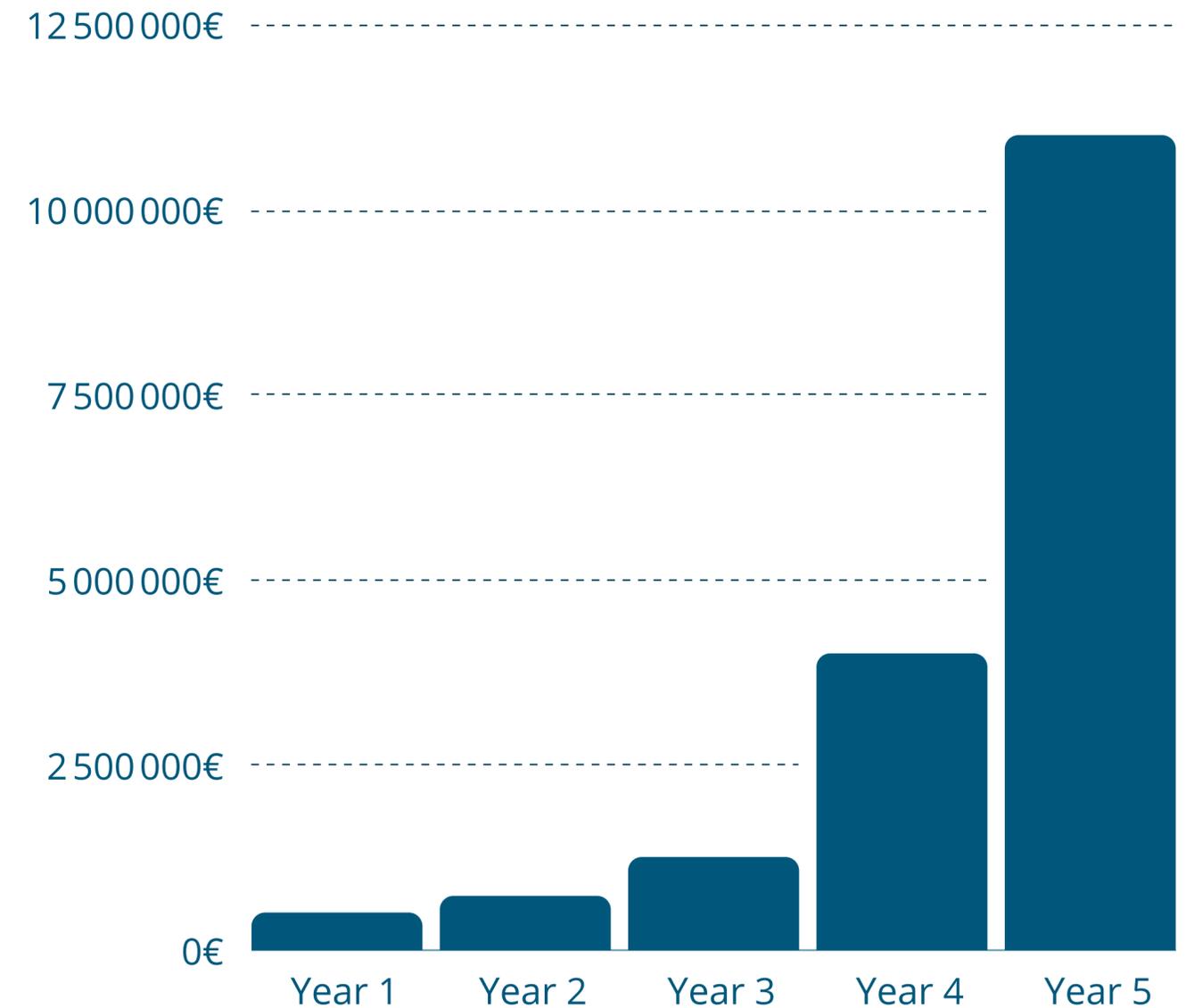
# New deployment

With a greater development potential resulting from the experience obtained in Bordeaux



- 3000 parking points over 5 years
- 600 parking points in the first year
- 26M € of developments to reach the target density

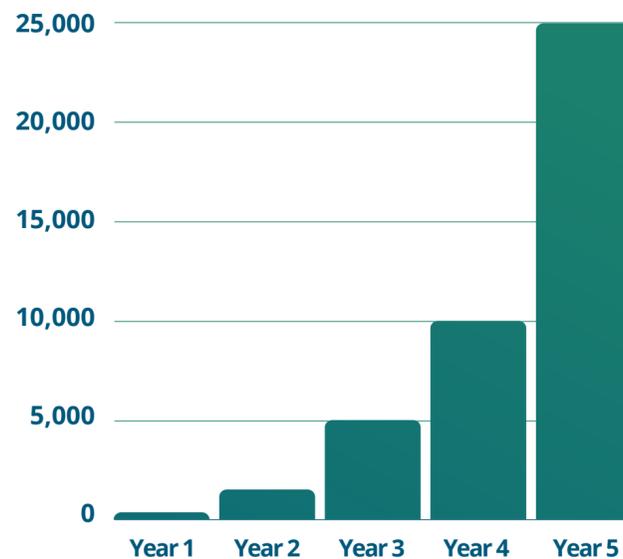
Average cost per parking point  $\approx$  8.6 k€.



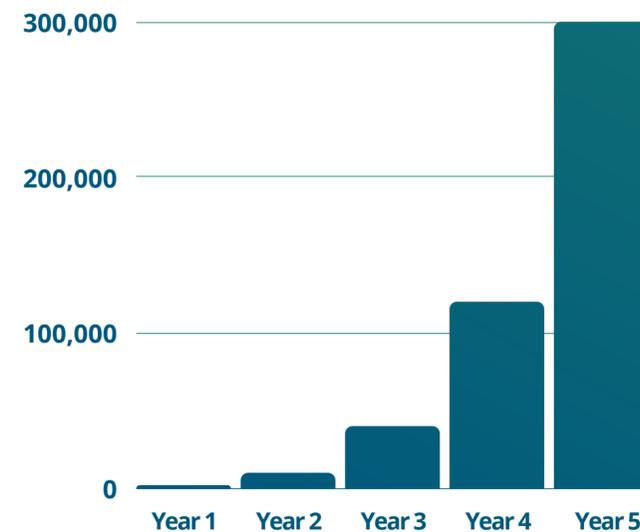
Strong local revenue growth over 5 years

France has **22 million cyclists** and a parking market of more than **€2 billion per year**.

### Target figures



Annual evolution of the parking lot



Annual evolution of the number of Cyc'lock subscribers



**Major target cities**

**The first brick laid by Cyc'Lock aims to bring the benefits of Elrond's Blockchain technology to an everyday utility without requiring users to have specific skills in the field.**

**In doing so, we develop 4 key expertises☒**

- 1 Identification of IoT needs in cities**
- 2 Deployment of embedded and connected solutions**
- 3 Implementation of data from connected objects in the blockchain**
- 4 Indexing data from the Elrond blockchain and inference via an API**

# By applying our methods to sectors such as



public  
lighting



general  
parking



public  
transport



traffic



waste  
management



intelligent  
buildings



public health  
/ pollution



We ensure a vast scalability potential to the project, while bringing a solution to one of the main problems evoked in smartcities projects:

**data management.**

# 2 The crypto model



**2.1** The Elrond blockchain

**2.2** The business model V1

**2.3** Securing the Network with Elrond Blockchain

**2.4** What to do with the CYC token

**2.4.1** Farming CYC

**2.4.2** Company services

**2.4.3** Mint and Stake NFTs

**2.5** Decentralized guarantee

**2.6** CYC token

**2.7** Initial distribution

**2.7.1** Presales / Launchpad

**2.7.2** Supply evolution

**2.8** DAO or not DAO ?

## 2.1

# The Elrond blockchain



High speed  
blockchain  
15k transactions/s,  
\$0.01/tx



Europe's first  
CO2-negative  
BlockChain



Large, growing and  
supportive community for  
new projects



Decentralization by  
3200 nodes in the  
world



More than 200  
partners

Secure  
Proof of Stake



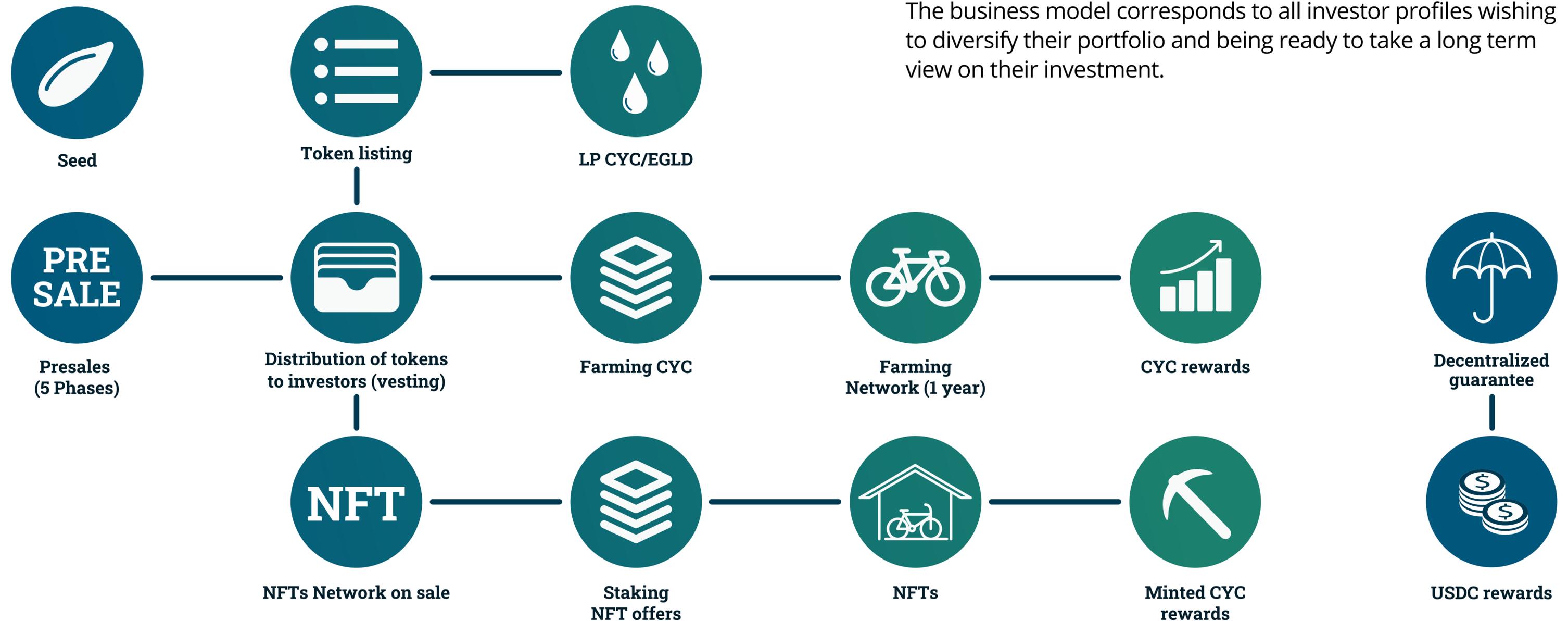
State-sharding,  
better transaction  
efficiency

## 2.2 The business model V1

One of the main values of Cyc'Lock is sharing.

Through the economic model, we have developed an idea that allows all stakeholders in the ecosystem to benefit from it.

The business model corresponds to all investor profiles wishing to diversify their portfolio and being ready to take a long term view on their investment.



## 2.3 Securing the Network with Elrond Blockchain

One of the main components of the project is security. From an IT point of view, security will initially be ensured using current methods.



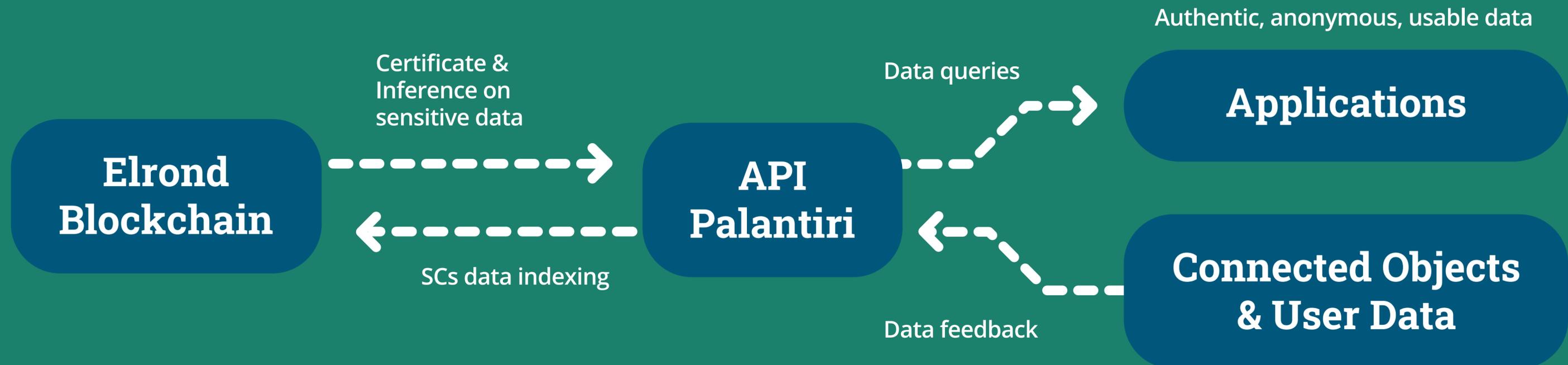
Once the foundations of the network have been laid, the network will be migrated to the Elrond blockchain.

The objectives are to

- 1 Develop an API linking our IoT data to the blockchain
- 2 Have all the history of use of the network for statistical purposes
- 3 Secure the Cyc'lock network through the blockchain
- 4 Protect user data and make them anonymous
- 5 Authenticate the collected data

The **API**, called "**Palantiri**" will be developed internally as well as the professional statistical processing tool.

Below is a diagram summarizing the usefulness of the developed application: 



The usefulness of these developments will not only stop at the CYC project but will extend to all future IoT projects developed by the company.



Some of the API features will also be used in other projects developing on Elrond.

# 2.4 What to do with the CYC token?



▼

**Farming  
CYC**

---

2.4.1

**Network  
Farming**



▼

**Company  
services**

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2.4.2

**Premium  
subscriptions**

**Bike  
Marketplace**



▼

**Mint and  
Stake NFTs**

---

2.4.3

**Each NFT represents  
a parking place**

## 2.4.1



# Farming CYC

## Network Farming

A staking offer will be put in place as soon as the token is listed, allowing CYC holders to **accumulate more CYC**.

The staking can be locked for a period ranging from **1 to 6 months**. The more you trust our project, the more you will be rewarded with a **boosted APR**.

This one year offer will distribute to stakers a part of the **16% token rewards**.

## 2.4.2



# Company Services

## 2

### Premium subscriptions

Holders of at least 50€ of CYCs will be entitled to a **discount** on the cost of the premium subscription to access the Cyc'lock network.

### Bike Marketplace

The **CYC** token and the **EGLD** will be accepted as a means of **payment on a marketplace** developed by Cyc'lock. Cyclists will be able to find a selection of bikes, accessories, equipment and dedicated tools, new or used.

## 2.4.3



# Mint and Stake NFTs

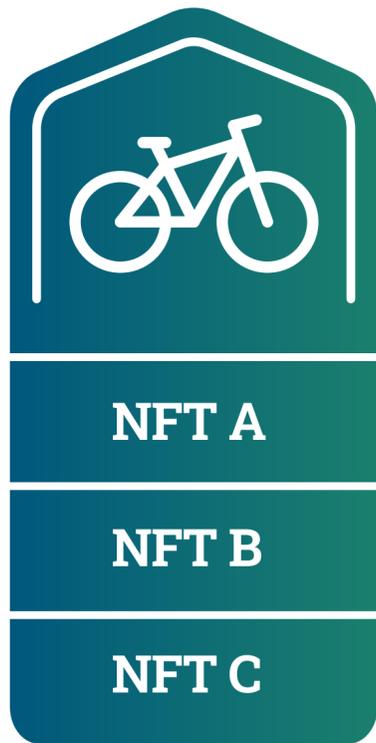
# 3

## Network NFTs

CYC tokens will allow to mint Network NFTs. Each NFT represents a parking place operated by the Cyc'lock company. There can only be one NFT for most of the parking places making them all rare and unique.

In order to allow more people to enter and also smaller wallets, some parking points will be split into several NFTs.

The cost in CYC of these NFTs will be defined according to the performance index of the parking point. This index, defined by the API, will be calculated from a public algorithm, representing the average occupancy rate of the garage and its frequentation. This index will be revised periodically.

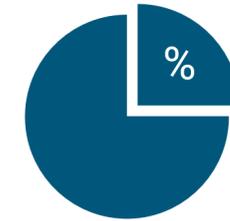


**Large Parking**  
Location divided  
into X subunits



**Small Parking**

X NFTs  
Minted



The higher the  
performance index,  
the higher the rewards



**Renting**  
**Guaranteed parking space**  
...

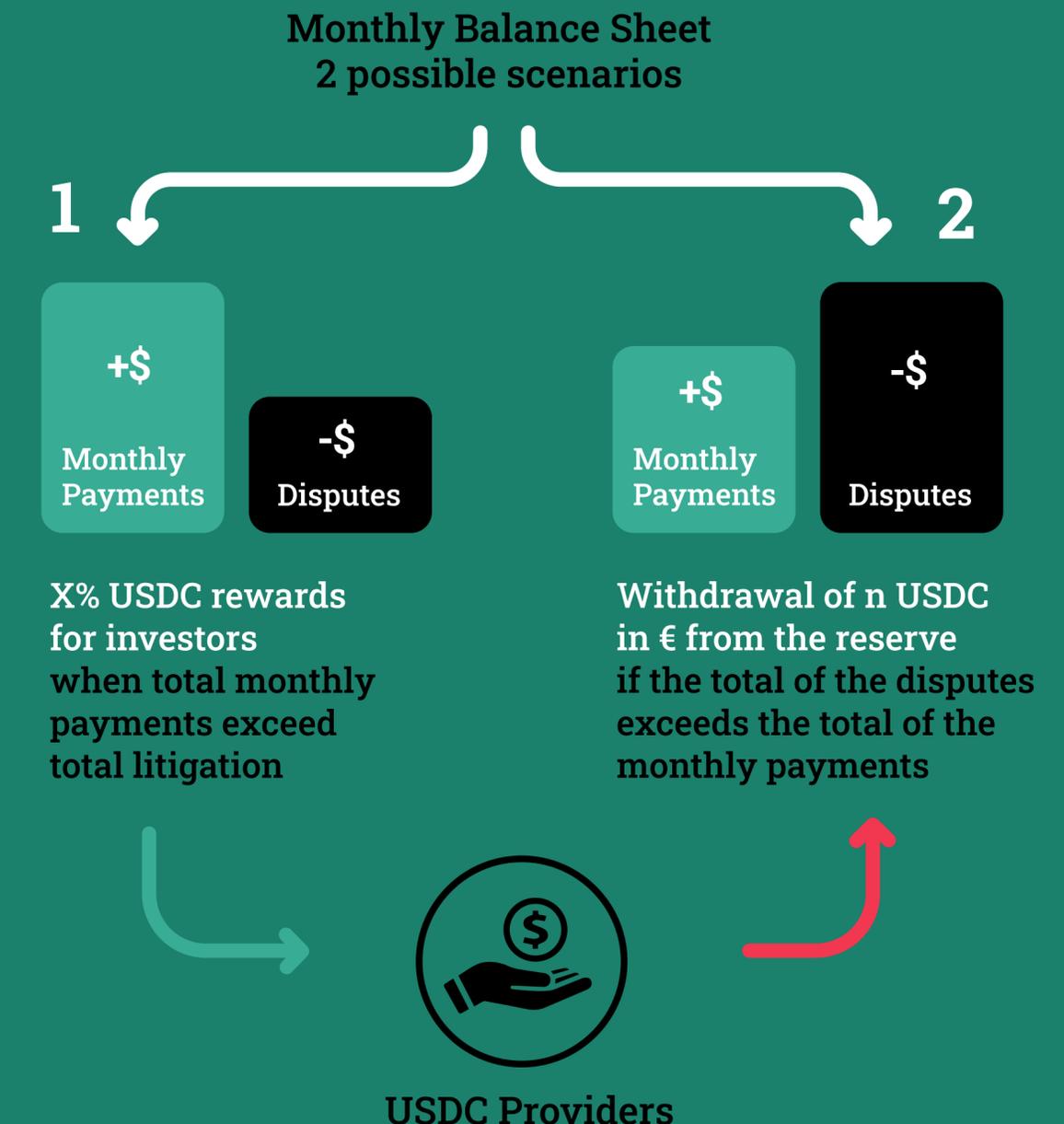
## 2.5 Decentralized guarantee

Despite all efforts, the possibility of theft or damage exists. Cyc'lock plans to implement a decentralized guarantee financed by the USDC token holders.

The liquidity provider will be able to deposit its USDCs in a smartcontract which will be made available to the company in case of a claim.

In case of problem, the victim can declare the theft or the degradation on his application and he will obtain, in case of confirmation of the dispute, the reimbursement of his material according to the GTC. Cyc'lock will systematically check the dispute in two ways, by visual and computerized observation.

In return the liquidity provider receives 80% of the monthly payments made by the subscribers to the guarantee in proportion to the number of USDC tokens present in the smartcontract.



## 2.6 The CYC Token

The CYC token allows investors to contribute to the development of the network and the growth of the company while receiving a fair return.





**CYC**



**An utility token**



**Decimals: 9**

**Supply: 100 000 000**

**Token ID: CYC-b4ed61**

**Allowing the investor to** 

**1**

**Actively participate in the growth of the Cyc'lock network**

**2**

**Invest in Network NFTs.**

**3**

**Benefit from the company's services**

**4**

**Buy bike equipment on a marketplace**

# 2.7 Initial distribution

**16%**  
Liquidity  
reserve

These tokens will be used to launch new pools, listings, etc.

**16%**  
Rewards

These tokens will be used to fund various rewards programs for the benefit of the community.

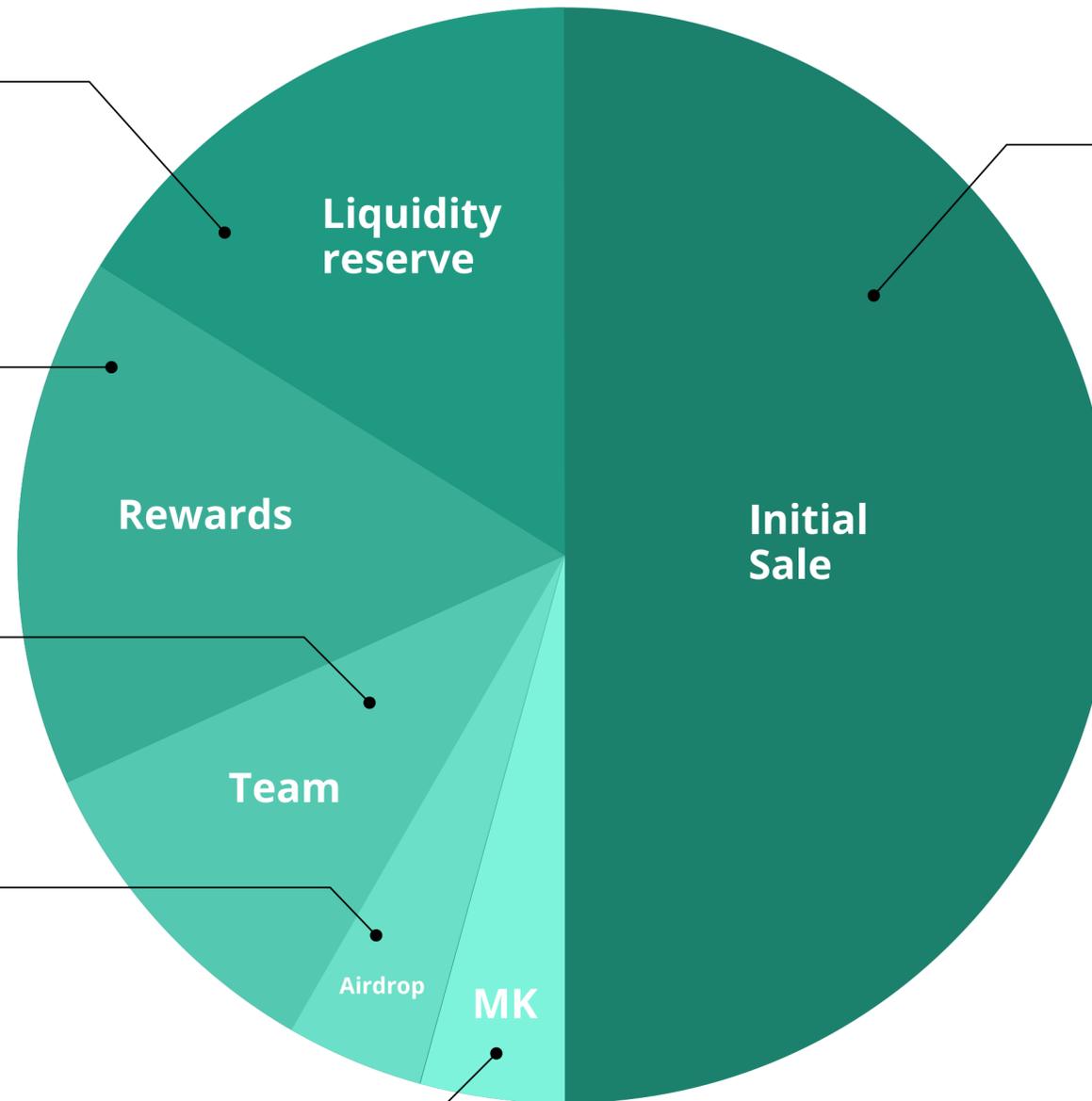
**10%**  
Team

These tokens dedicated to the team and the consultants will be vested. (10% one year after the listing then 5%/month).

**4%**  
Airdrop

**4%**  
Marketing

These tokens will be used to attract new partners to the project.



**50%**

Tokens offered for sale before listing

These tokens correspond to those that were offered for sale during the seed and presale. If all tokens are not sold :

80% of the remaining tokens will go into the Rewards reserve

20% of the remaining tokens will go into the liquidity reserve



The tokens sold in seed/presale will be vested over a period of 5 months (20% released before the listing, then 20%/month).

You'll be able to claim the tokens on our dApp.

## 2.7.1 Presales / Launchpad

Presales phase of the tokens will take place in 5 stages at an entry cost for the first presale of 0,05€/CYC.

A total of 50 million tokens will be offered during those stages.

The sale will take place on our DApp developed by the JEXchange team.

The price will evolve as follows:

Minimum +0,025€ or 0,0001 EGLD  
(According to the price at the time of calculation) between each phase:

Phase **1** 4,5 millions Tokens

Phase **2** 6 millions Tokens

Phase **3** 8 millions Tokens

Phase **4** 10.5 millions Tokens

Phase **5** 13 millions Tokens

## 2.7.2 Supply evolution

**All CYCs dedicated to the PURCHASE of NFTs will be BURNED**

introducing the deflationary character of the supply correlated to the growth performance of Cyc'lock networks.



**BURN**



**All the CYCs dedicated to the REWARDS of the NFTs stakers will be MINTED**

introducing the inflationary character of the supply correlated to the performance of the Cyc'lock networks.



**MINT**



**The deployment of Cyc'lock on a new city will introduce a token minting mechanism calculated according to the commercial projections to be realized on the city.**

**For example, when Cyc'lock is deployed in a new large city, it can be planned to**



**install up to 1,000 parking points**



**over 5 years**

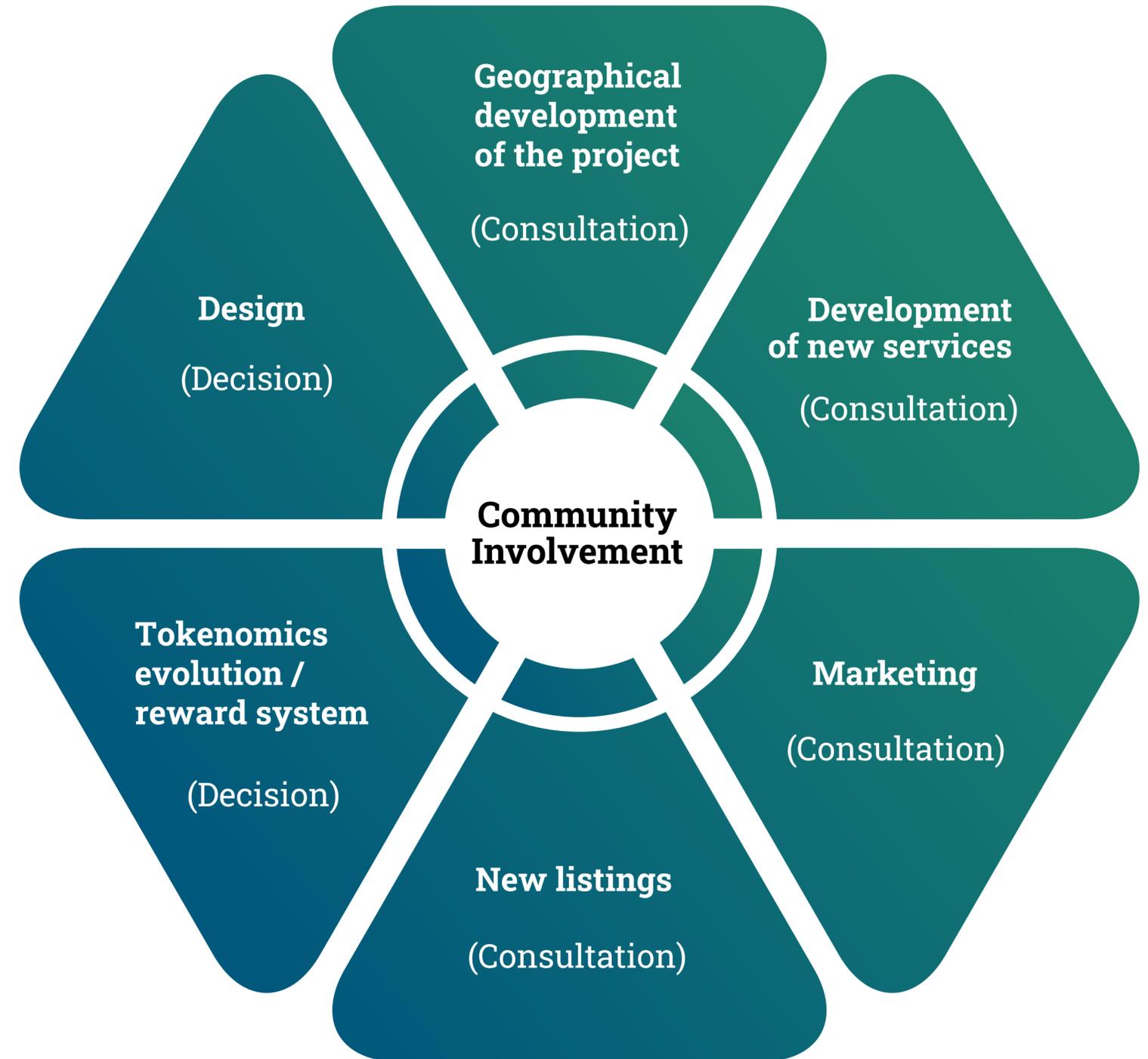
Thanks to the API, and according to the known performances on the previous cities, an average index of performance of parking point will be proposed. This index will be used to calculate the average number of CYC tokens to be burned to mint the NFTs Network of this city.

This number will be used to define the number of minted tokens and their injection period.

The objective is to preserve a supply in circulation globally at the balance (between Mint and Burn) allowing to ensure the arrival of new entrants as the company grows.

## 2.7.2 DAO or not DAO?

The acquisition of tokens allows access to part of the governance of the project. We want to offer many consultations to the community including on the following topics



The overall business of the company will remain managed by the corporate team but the governance of the platform will be decentralized.

# 3 The Team



**Mawuse  
Degboe**

Coming from high tech physics, driven by the ecological transition and invested in the crypto ecosystem.

He is in charge of the company's presidency and oversees commercial activity and CYC project.



**Louis  
Gely**

Trained in innovative project management, rigorous logistician and passionate about change.

Within Cyc'lock, he is in charge of the logistics and the development of the connected garage.



**Louis  
Schneider**

An engineer-entrepreneur, he listens to the markets and is passionate about technological innovation and usage.

He is in charge of marketing and acts as a digital project manager.



**Thomas  
Le Gall**

Passionate about adventure, has an outstanding commercial fibre, and wishes to participate in the development of territories.

He is responsible for the commercial development of Cyc'lock



**IKUBATOR**

First French-speaking innovation network, generator of disruptive innovation, which has accompanied more than 200 startups.

IKUBATOR is a financial partner of Cyc'Lock and supports the team.

# 4 Roadmap

